

# UPMC Health Plan POLICY AND PROCEDURE MANUAL

**POLICY NUMBER: PAY.084**  
**REVISION DATE: N/A**  
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**PAGE NUMBER: 1 of 6**

**SUBJECT:** Hyperbaric Oxygen Therapy  
**INDEX TITLE:** Medical Management  
**ORIGINAL DATE:** November 2009

**This policy applies to the following lines of business: (Check those that apply.)**

<b>Commercial:</b>				
HMO ( )	POS ( )	PPO ( )	OOA/DOC ( )	
Fully Insured ( )	Self-funded/ASO ( )	HSA ( )	All (X)	
Medicare Select ( )	Medicare Supplement ( )			
<b>DPW-MA:</b>				
Health Choices ( )		Voluntary ( )		All (X)
<b>CMS-MA:</b>				
OH ( )	WV ( )	PA ( )	All (X)	Other ( )
HMO (X)	PPO (X)	Specialty Needs Plan (X)	Part D ( )	PFFS (X)
<b>PID-CHIP:</b>				
Free ( )	Sub ( )	Full ( )	All (X)	
<b>APPLICABLE TO:</b>				
Community Care ( )		Work Partners ( )		

## **I. POLICY**

It is the policy of UPMC Health Plan to cover Hyperbaric Oxygen Therapy when it is medically necessary as detailed in this policy and covered under the member's specific benefit plan

## **II. DEFINITIONS**

**Wagner Grading System (WGS):** a classification for diabetic foot wounds/ulcers to assist with treatment:

- Grade 1: Superficial diabetic ulcer
- Grade 2. Ulcer extension
  1. Which involves ligaments, tendons, joint capsule or fascia
  2. No abscess or osteomyelitis
- Grade 3 Deep ulcer with abscess or osteomyelitis
- Grade 4 Gangrene to portion of forefront
- Grade 5 Extensive gangrene of foot

## **III. PURPOSE**

The purpose of this policy is to provide the indications for coverage of Hyperbaric Oxygen Therapy.

#### **IV. SCOPE**

This policy applies to various UPMC Health Plan departments as indicated by the Benefit and Reimbursement Committee. These include but are not limited to Medical Management, Benefit Configuration and Claims Departments.

#### **V. PROCEDURE**

##### **A. Medical Description / Background:**

Hyperbaric Oxygen Therapy (HBOT) is a treatment modality in which the entire body is exposed to 100% oxygen while in a pressurized chamber which is under greater than normal atmospheric pressure. The intent of HBOT is to increase the oxygenation of a patient's blood and tissues and this reportedly triples oxygen diffusion. An additional benefit is vasoconstriction which may help reduce posttraumatic swelling. The Undersea and Hyperbaric Medical Society initially approved the use of HBOT to help deep-sea divers recover from the "bends". Now proponents of the therapy report that HBOT inhibits bacterial growth, improves white blood cells' ability to kill bacteria, blocks adhesion of leukocytes to blood vessel walls, and enhances the activity of certain antibiotics.

HBOT is administered using a monoplace chamber (single-person) or a multiplace chamber. The monoplace chamber consists of a horizontal chamber made of acrylic or metal. The patient sits in a chair or lies on a stretcher within the chamber. They are the least costly option for initial setup and operation but provide fewer opportunities for patient interaction during the treatment. Multiplace chambers are designed to hold two or more patients and patients breathe 100% oxygen through a mask, hood or endotracheal tube which allows medical personnel to work in the chamber and care for acute patients to some extent. The entire chamber is pressurized so medical personnel may require controlled decompression. A typical treatment lasts 30 to 90 minutes and the total number of treatments varies depending on the condition.

The use of HBOT as an adjunct therapy for the treatment of diabetic wounds of the lower extremities is covered only after the wound has shown no signs of measurable healing after standard wound therapy. Standard wound care would consist of:

- assessment of the patient's vascular status and correction of any vascular problems if possible in the affected limb,
- maintenance of a clean, moist wound bed of granulation tissue with appropriate dressings,
- optimizing the nutritional status,
- debridement to remove devitalized tissue
- optimizing of glucose control and
- resolution of any infection

**B. Indications listed are for systemic HBOT which is administered in a chamber and limited to the following conditions:**

- Gas embolism/gangrene
- Decompression illness
- Acute carbon monoxide intoxication
- Acute traumatic peripheral ischemia. HBOT is a valuable adjunct treatment to be used in combination with accepted standard therapeutic measures when loss of limb, function, or life is threatened.
- Crush injuries and suturing of severed limbs. HBOT would be an adjunctive treatment
- Progressive necrotizing infections (necrotizing fasciitis)
- Acute peripheral arterial insufficiency (i.e., compartment syndrome)
- Preparation and preservation of compromised skin grafts (not for primary management of wounds)
- Chronic refractory osteomyelitis unresponsive to conventional medical and surgical management
- Osteoradionecrosis as an adjunct to conventional treatment
- Cyanide poisoning
- Actinomycosis, only as an adjunct to conventional therapy when the disease process is refractory to antibiotics and surgical treatment
- Diabetic wounds of the lower extremities in patients who meet the following criteria:
  1. Patient has type I or type II diabetes and has a lower extremity wound that is due to diabetes
  2. Patient has a wound classified as Wagner grade III or higher **and**
  3. Patient has failed an adequate course of standard wound therapy (no measurable signs of healing for at least 30 days of treatment)

**C. Limitations - no coverage is available for conditions other than listed above including any of the following:**

- Cutaneous decubitus and stasis ulcers
- Acute or chronic cerebral vascular insufficiency
- Aerobic septicemia
- Skin burns
- Senility
- Myocardial infarction
- Cardiogenic shock
- Sickle cell anemia
- Hepatic necrosis
- Aerobic necrosis
- Organ transplantation and/or storage
- Pulmonary emphysema
- Multiple sclerosis
- Acute cerebral edema
- Chronic peripheral vascular insufficiency

- Anaerobic septicemia and infection other than clostridial
- Acute thermal and chemical pulmonary damage, i.e., smoke inhalation with pulmonary insufficiency
- Exceptional blood loss anemia
- Nonvascular causes of chronic brain syndrome (Pick's disease, Alzheimer's disease, Korsakoff's disease)
- Tetanus
- Systemic aerobic infection
- Arthritic diseases
- Topical HBOT
- Portable home hyperbaric chambers
- Pregnancy (except as primary treatment)

**Note:** Wounds must be assessed at least every 30 days during treatment with HBOT. If no measurable signs of healing have occurred within that 30 day period- then HBOT treatment is non covered.

Practitioners who perform HBOT should obtain adequate training in the use of HBOT and in advanced cardiac life support.

**D. Variations:**

N/A

**E. Quality Audit**

Quality Audit may monitor policy compliance or billing accuracy at the request of the UPMC Health Plan's Technology Assessment Committee or the Benefits Reimbursement Committee.

**F. Records Retention**

Records Retention for UPMC Health Plan documents, regardless of medium are provided within the UPMC Health System Policy and as indicated in the UPMC Insurance Services Division Policy and Procedure.

**G. References:**

1. ECRI Institute, *Hyperbaric oxygen therapy (HBOT) for acute soft tissue injury*, 08/2006
2. Centers for Medicare & Medicaid Services, NCD 20.29- *Hyperbaric Oxygen Therapy*, 06/19/2006
3. U.S. Department of Health & Human Services, Agency for Healthcare Research and Quality, *Hyperbaric Oxygen Therapy for Brain Injury, Cerebral Palsy and Stroke*, Evidence Report 85, 09/2003

4. Highmark Medicare Services, Frequently Asked Questions- *Hyperbaric Oxygen Therapy*, Reviewed/Revised 09/14/2009
5. American College of Hyperbaric Medicine, Billing & Coding, 2009
6. ECRI Institute, *Hyperbaric Oxygen Therapy for Chronic Wound Healing*, 08/23/2007
7. Cigna Medical Coverage Policy, Coverage Policy Number 0053, *Hyperbaric Oxygen Therapy, Systemic & Topical*, 04/15/2009

**Disclaimer:**

UPMC Health Plan medical payment and prior authorization policies do not constitute medical advice and are not intended to govern or otherwise influence the practice of medicine. The policies constitute only the reimbursement and coverage guidelines of UPMC Health Plan and its affiliated managed care entities. Coverage for services varies for individual members in accordance with the terms and conditions of applicable Certificates of Coverage, Summary Plan Descriptions, or contracts with governing regulatory agencies.

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